

REMARKS

Claims 1, 2 and 4-13 are now currently pending in the present application. Claims 1, 4, 5, 7, 11 and 12 have been currently amended in the present application. New claim 13 has been added. Support for the present claim amendments may be found in the present specification, at least, at page 7, lines 12-14 and page 10, lines 17-23.

Objection to the Drawings

The Examiner has objected to the drawings stating that the claimed material of claims 1-12 is not shown. Applicants respectfully traverse.

In accordance with MPEP § 608.02, while the applicant for a patent is required to furnish a drawing of his or her invention where necessary for the understanding of the subject matter sought to be patented, a drawing is not required if the application contains:

- (A) at least one process claim including the term "process" or "method" in its introductory phrase;
- (B) at least one composition claim including the term "composition," "compound," "mixture" or "pharmaceutical" in its introductory phrase;
- (C) at least one claim directed to a coated article or product or to an article or product made from a particular material or composition (i.e., an article of known and conventional character (e.g., a table), coated with or made of a particular composition (e.g., a specified polymer such as polyvinyl-chloride));
- (D) at least one claim directed to a laminated article or product (i.e., a laminated article of known and conventional character (e.g., a table)); or
- (E) at least one claim directed to an article, apparatus, or system where the sole distinguishing feature is the presence of a particular material (e.g., a hydraulic system using a particular hydraulic fluid, or a conventional packaged suture using a particular material).

Here, at least (A), as noted above, is applicable. Moreover, the present specification does not include any reference to a drawing. Therefore, Applicants respectfully request withdrawal of the outstanding drawing objection.

Objection to the Abstract

The Examiner has objected to the Abstract stating that it contains legal phraseology (i.e., comprises). Applicants have amended the present abstract to replace “comprises” with “includes”. Thus, the Examiner’s concern has been fully addressed. Withdrawal of the outstanding objection is respectfully requested.

Claim Objections

Claims 1, 5, 7, 11 and 12 have been objected to as stated in paragraphs 3-5 of the Office Action.

In response to the outstanding claim objections, Applicants have amended the claims to fully address the Examiner’s concerns. Accordingly, Applicants respectfully request withdrawal of the outstanding claim objections.

Rejection under 35 U.S.C. §102 – Anticipation

Claims 1, 4 and 8 stand rejected under 35 U.S.C. § 102(e) as being anticipated by USP 7,326,497 to Matsubara et al. (hereinafter “Matsubara”).

Applicants have amended claim 1 to incorporate the subject matter of now cancelled claim 3. The subject matter of claim 3 is not subject to the outstanding rejection.

Matsubara discloses a production method comprising graphite and binder. It discloses as a binder, vinyl resin, cellulose resin, phenol resin, thermoplastic resin, and thermosetting resin. Styrenebutadiene rubber is also exemplified. *See* col. 8, lines 12-20; and col. 10, line 20.

However, Matsubara does not disclose activated carbon as a carbonaceous material. Matsubara specifically discloses that the composition is used for a negative electrode for a lithium secondary battery. While Matsubara discloses that the composition may be used in application of an electric double layer capacitor (DLC), it does not disclose such a method for producing its electrode.

Thus, for at least the above reasons, Matsubara does not anticipate the presently claimed invention, within the meaning of 35 U.S.C. § 102. Withdrawal of the outstanding rejection is respectfully requested.

Rejections under 35 U.S.C. §103 – Obviousness

Claims 1, 3-8 and 10-12 stand rejected under 35 U.S.C. § 103 as being unpatentable over USP 4,717,595 to Watanabe et al. (hereinafter “Watanabe”) in view of USP 6,258,337 to Sonobe et al. (hereinafter “Sonobe”).

Claim 2 stands rejected as being obvious over Watabe and Sonobe, as applied to claim 1, and further in view of USP 6,294,257 to Tsukakoshi et al. (hereinafter “Tsukakoshi”).

Claim 9 stands rejected as being obvious over Watabe and Sonobe, as applied to claim 8, and further in view of US Patent Publication 2001/0051300 to Moriguchi et al. (hereinafter “Moriguchi”).

Watanabe in view of Sonobe

Watanabe discloses a shaped or molded carbonaceous materials comprising a carbonaceous powder and a binder (column 1, lines 8-10). It discloses that the shaped or molded carbonaceous materials may be used as polarized electrodes in electric double layer capacitors (column 1, lines 13-16). The molded carbonaceous materials can be produced by mixing said latex with a carbonaceous powder and shaping or molding the mixture under pressure (column 2, lines 4-7). As the latex, SBR is exemplified (column 2, line 17). The carbonaceous powder is

prepared in the form of a dispersion in water or some other solvent (column 2, lines 43-45).

However, in Watanabe, the dispersion of carbonaceous powder and the latex is mixed, and the solvent portion forms a supernatant and is separated from the carbonaceous powder to obtain an aggregated mixture (column 2, 48-59). This means that the carbonaceous powder and binder are mixed as a solution, which is different from "in a powdery form" as required by claim 1. Watanabe does not disclose or suggest a powdery mixture. Further, in Watanabe the solid content is presumed to be low since the solvent portion forms a supernatant.

Sonobe does not cure the noted deficiency of Watanabe. Sonobe discloses that a composite electrode material may be formulated by mixing the carbonaceous material with a binder, which is compression-molded to form a polarizable electrode (column 5, lines 8-18). Sonobe does not disclose that the binder is a particulate elastomer as is required by the present claims.

The Examiner has taken the position that the claimed invention is rendered obvious by Watanabe in view of Sonobe. However, Applicants respectfully submit that there is no motivation to combine Watanabe, which does not disclose or suggest mixing in a powdery form, with Sonobe, which discloses a method that is completely different from Watanabe. Thus, there exists no *prima facie* case of obviousness.

Moreover, any hypothetical *prima facie* case of obviousness is rendered moot by the unexpectedly superior results of the present invention. For instance, according to the present invention, "an electrode for an electric double layer capacitor can be effectively formed by mixing a particulate elastomer and a carbonaceous material in a powdery form and then dry-forming the powdery mixture obtained by the mixing, and an electric double layer capacitor wherein the electrode is used exhibits a high electrostatic capacity." See the present specification, page 4, lines 4-9. This superior effect is not disclosed in either of Watanabe and Sonobe, singularly or taken together.

Therefore, Applicants respectfully submit that the invention of claim 1 is not rendered obvious from Watanabe in view of Sonobe.

With regard to claim 6, the Examiner has taken the position that Sonobe discloses that the powdery mixture is a mixture obtained by fluidized bed granulation or fluidized bed multifunction mode granulation (column 7, line 22-30). Applicants respectfully disagree.

Sonobe discloses that a carbonaceous material (thermally infusible porous pitch product) was subjected to a steam activation treatment in a fluidized bed. Notably, Sonobe does not disclose granulation in a fluidized bed.

Regarding claim 7, the Examiner has taken the position that Watanabe discloses the particle diameter of the powdery mixture. Applicants respectfully disagree.

Watanabe discloses the diameter of latices (i.e., the plural form of latex)(column 2, lines 34-35). It does not disclose the diameter of powdery mixture, as alleged by the Examiner.

Claim 2 - Watanabe and Sonobe in view of Tsukakoshi

Claim 2 includes all of the limitations of claim 1. Thus, for at least the reasons discussed above, claim 2 is not rendered obvious by the proposed combination of Watanabe in view of Sonobe. The Examiner has turned to Tsukakoshi to cure the deficiency of the Watanabe/Sonobe combination. However, Applicants respectfully submit that this proposed combination of prior art does not arrive at the presently claimed invention.

Tsukakoshi discloses an electrically conductive elastomer film comprising thermoplastic elastomer and electrically conductive filler, which is useful as conductive collectors and electric double-layer capacitors (column 1, lines 12-16). It also discloses that in order to enhance the strength of the conductive thermoplastic elastomer composition, a crosslinking agent may be incorporated in the elastomer composition (column 7, lines 48-50).

However, Tsukakoshi does not disclose: that the thermoplastic elastomer is a particulate elastomer; that the obtained electrically conductive elastomer film is used as an electrode for electric double layer capacitor; or using activated carbon. Moreover, in Tsukakoshi the electrically conductive elastomer film is produced by a solution casting method, which is different from dry-forming method of present claim 1

Additionally, claim 2 requires "the use of the polymer having the crosslinked structure" which "makes it possible to keep the particle shape thereof stable." *See* the present specification, at page 6, lines 8-9. This feature is not disclosed in Tsukakoshi.

Therefore, claim 2 is not rendered obvious by the proposed combination of Watanabe and Sonobe in view of Tsukakoshi.

Claim 9 - Watanabe and Sonobe in view of Moriguchi

Claim 9 depends upon claim 8. As explained above, Applicants respectfully submit that the invention of claim 8 (which contains all of the limitation of claim 1) is not obvious from Watanabe in view of Sonobe.

Moriguchi discloses that a production method for graphite powder suitable for a negative electrode material of a lithium ion secondary battery. It discloses adding resin powders (i.e., polyethylene or polyvinyl alcohol powders) to graphite powder; dry mixing the components; molding the resulting mixture by hot-pressing using a metal mold; and then simultaneously thermally affixing the molded product onto the current collector.

However, Moriguchi does not disclose activated carbon as an active material, nor does Moriguchi disclose the use of a particulate elastomer as a binder. Additionally, it should be noted that Moriguchi discloses the production method of electrode for lithium ion secondary battery, not for an electric double layer capacitor, as is required by the present invention.

Therefore, the invention of our claim 9 is not obvious over Watanabe and Sonobe in view of Moriguchi.

Accordingly, Applicants respectfully request reconsideration and withdrawal of each of the outstanding rejections. Moreover, Applicants believe the pending application is in condition for allowance. A Notice of Allowance is earnestly solicited.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Monique T. Cole, Reg. No. 60,154 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

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